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1961 CATALOGUE

VETTERLE & REINELT

Hybridizing Gardens
CAPITOLA, CALIFORNIA



a thoughtful
year 'round gift
...that continues to give

At last—a really different way to say “Merry Christmas”, “Happy Birthday”—or any other anniversary or event, for that matter. We will send a gift of superb V & R tubers to the recipients *you name* at proper planting time, also available for your gift giving are plants and seeds of Delphinium, Primroses and Begonias. And . . . a beautifully illustrated gift card—personalized with your name as donor—goes forward to arrive on the event day. The advance gift card shows one of the newer origination tuberous begonias developed by Vetterle & Reinelt in full color.

Simply indicate on your order blank—the name, address and date of gift card arrival time—the tuber selection. We'll do the rest.

February and March is the Primrose time at our Capitola grounds.

The finest collection of Tuberous Begonias in the world can be seen in our greenhouses during July and August in Capitola. Over 5000 specimens of all types and colors demonstrating all the new advances in breeding are on display, making any flower show look insignificant in comparison. More than 50,000 visitors come to view the display each year during the summer months.

Our main fields of begonia seedlings are located on Mission Street in Santa Cruz and at La Selva Beach, near Aptos. Here solid sheets of color can be seen during September and October.

Rose form type

STANDARD GRADE

The ultimate classical form in tuberous begonias is that resembling the roses for which we have been striving, selecting and breeding for years. The transition from Double Camellia form from which the Rose form was developed is not fully completed. However, these plants formerly listed as double camellia type are now more of a Rose form, although some percentage will still resemble the Double Camellia.

AVAILABLE COLORS

White, Pink, Rose, American Beauty, Cardinal Red, Scarlet, Dark Red, Yellow, Apricot, Orange, Flame Orange, Blush Salmons, Pink Salmons, Light Salmons, Dark Salmons.

TUBERS

Delivery, January-March.

Large size, 2" up .75c ea.; \$7.50 doz.; \$60.00 per 100

Medium size, 1½" 50c ea.; \$5.00 doz.; \$40.00 per 100

SEEDLING PLANTS

Available in May and June.

\$6.50 per 25; \$25.00 per hundred, FOB CAPITOLA.

Due to cost of packing no orders for less than 25 accepted.

SEED

Available from December on.

Artificially cross-pollinated from the finest plants in existence.

\$4.00 per packet; \$2.00 per half packet (straight colors or mixture).





Rose form type

TUBEROUS BEGONIAS

SPECIAL SELECT TUBERS

Contrary to the practice of propagating named varieties of tuberous Begonias, we offer selected seedling tubers instead. Propagation of individual varieties is costly and slow, so that by the time a sufficient amount has been reproduced for introduction they are already obsolete as compared with seedlings. Breeding is advancing so rapidly that today's choice is the discard of tomorrow. During flowering season we select and mark all the choicest new seedlings which are above average

in size, form and color. We are offering tubers of these to connoisseurs who desire only the finest for their gardens.

AVAILABLE COLORS

White, Pink, Rose, American Beauty, Cardinal Red, Scarlet, Dark Red, Yellow, Apricot, Orange, Flame Orange, Blush Salmons, Pink Salmons, Light Salmons, Dark Salmons.

Tubers—Delivery, January-March.

Large size, 2" up \$1.50 ea.; \$15.00 per doz.

Medium size, 1½" \$1.00 ea.; \$10.00 per doz.

Ruffled Camellia type

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Medium size, 1½" \$1.00 ea.; \$10.00 per doz.



Ruffled Camellia type

STANDARD GRADE

TUBEROUS BEGONIAS

We developed this spectacular new form by interbreeding the old fimbriata plena with the best forms of the double camellia type. Each year new advances in size, form and quality seem to supercede the achievement of the past. They were designed primarily for cut flower purposes, but the beautiful variations of frilling, ruffling and scalloping that appears amongst these new forms made it one of the most popular group of begonias today. They are enormously vigorous and in some colors 8" and 9" flowers are quite common. In this group also are some of the most mildew resistant plants.

AVAILABLE COLORS

White, Pink, Rose, Cardinal Red, Scarlet, Dark Red, Yellow, Apricot, Orange, Flame, Blush Salmon, Pink Salmon, Light Salmons, Dark Salmons.

TUBERS

Delivery, January-March.

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Medium size, 1½" 50c ea.; \$5.00 doz.; \$40.00 per 100

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Culture of Tuberous Begonias

SOWING SEED

Pacific Strain Tuberous Begonia seed is sown in January or February. The preferred seeding medium is a partially rotted hardwood leaf mold. This should be sterilized, to insure destruction of all harmful organisms. Screen the sterilized leaf mold through a one-half inch mesh screen, placing a thin layer of the coarse material on the bottom of a three inch deep nursery flat, or shallow box, and fill to a depth of one inch with the screened leaf mold. Cover surface with a thin layer of finely screened leaf mold in which the seed then is sown.

Firm lightly, and with a fine spray moisten thoroughly with sterilized water. As an extra precaution sterilized water should be used prior to germination, and for four weeks after seedlings appear. Coating the seed with Rootone will make the sowing of seed easier. Broadcast seed thinly on the moist leaf mold. Do not cover seed, or firm leaf mold. Immediately seal tightly with a sheet of glass, and preclude all light with a sheet of paper. A constant minimum top and bottom temperature of 74° will insure an even germination within 8 days. Moisture should be checked every other day, being especially watchful on the 6th and 7th day. Paper must be removed when seed coat is observed to be splitting, even before the green of emerging cotyledons is evident. The glass should at first be raised slightly with a match stick, and air admitted gradually, removing glass completely within a week or ten days. Seedlings must be kept evenly moist with a fine spray, and given sufficient light and air to maintain compact plant growth. Stagnant air and over-watering will cause Damp-off. The consistent feeding of Atlas Fish Emulsion at one-third recommended strength, bi-weekly, will give the tiny plants stamina.

TRANSPLANTING SEEDLINGS

Transplanting is accomplished before plants crowd one another. The first transplant is usually made within eight weeks of sowing, and for heavier root systems, a second in sixteen weeks. For transplanting, fill flat with the same leaf mold, unscreened. Do not pack; leave material loose and fluffy. Continue to feed fish emulsion bi-weekly. WATER CAREFULLY, maintain even moisture, avoid soggy wetness. Seedlings will be ready for potting, or planting out in May. Recommendations for light conditions, and proper potting and outdoor planting methods are outlined under tuber culture, and will apply for seedling plants.

FEEDING

For pots or beds a definite feeding program will reward the grower with stronger growth, and increased bloom. After transplanting, when active growth is observed, commence the following routine: Feed one tablespoon of California Liquid's 8-8-4 or 10-10-5, mixed in one gallon of water once a week until plants begin to flower. After plants begin to flower switch to this combination: one tablespoon of Atlas Fish Emulsion, combined with one tablespoon of California Liquid's 2-10-10 in one gallon of water once a week. Cease to fertilize by the end of September. The use of the first combination is intended to induce strong plant growth; the latter combination will harden cell structure, strengthen flower stems, provide an abundance of firm, highly colored blossoms, and store energy for the tubers' resting period. The individual must judge when plants are under fed, well fed, or over fed.

Maintain a deep green color, and a meaty thickness of leaf. A slightly turning under of the leaves is no cause for alarm, a definite "roll" indicates over feeding. Beware of a sickly yellow green, the sign of starvation. The current season's care and feeding will be reflected in the following season's flowering.

PLANTING DORMANT TUBERS

Time and effort will be conserved if Pacific Strain tubers are planted in the starting flat after they show pink buds. The planting medium is preferably a coarse hardwood leaf mold, or an organic

substitute, which will not pack and become soggy, thereby excluding air. Peat moss, holding 90 per cent of its weight in water when saturated, is not recommended as a starting medium for dormant tubers. Fill a nursery flat with coarse leaf mold, and space the tubers evenly, allowing sufficient space between tubers for heavy root development, which may be considered the most important factor in the ultimate growth of fancy begonias. Bury the spaced tubers, covering with one-half inch of leaf mold. This is a very essential step, one which we wish to emphasize strongly. Its omission will preclude the full development of roots from the tubers' base, sides, and top, as nature intended. The planted flat should be WATERED CAREFULLY, maintaining even moisture, but not soggy wetness. Place flat in strong light; shield from direct sun's rays. A warm 65° to 75° temperature will hasten growth. Every effort should be made for close, compact plant growth, and prevent any suggestion of weak, spindly growth. Plants are potted, or planted in prepared beds, if the weather is favorable, when the first two leaves have reached equal development. At this stage the roots are heavy, and will adjust to transplanting.

TRANSPLANTING MATURE PLANTS

Firstly, to consider transplanting from flat to pots. Begonias do not root deeply, and the shallow eight or nine inch azalea pots are preferred to the deeper pots. Our standard potting mixture consists of two-thirds partly rotted oak leaf mold and one-third coarse sand. Remove plant from starting flat carefully. Mix one handful of fish meal with enough potting mixture to fill the bottom two-thirds of pot, place plant in pot, fill in around root mass. Firm, and finish by covering top of root mass lightly with a quarter inch of potting soil. WATER CAREFULLY.

The prime soil consideration for outdoor beds of Pacific Strain tuberous begonias is perfect drainage. One-third leaf mold, one-third sand, one-third sandy loam is good. The addition of one-half sand to existing garden soil will generally drain well. If rotted cow, or steer manure is added to the bed, it should be mixed thoroughly a month in advance, and watered several times. In planting, place a handful of fish meal under the root mass, and barely cover the root mass with soil. Soil should not be pulled in contact with plant's stalk. The points of all leaves should face the front of bed, presenting a uniform appearance to finished planting. Location of planting area in relation to the sun is important, and can spell success or failure. They will not perform satisfactorily in complete shade, nor in a bright, sunny spot. If too shaded there will be little or no bloom, but lush plant growth. Excess sun will stunt and burn. The correct degree of light and shade will produce strong, compact plants, and profuse bloom. Suggested locations include the north side of buildings, light tree shade, lath houses. After transplanting, the most important consideration is CAREFUL WATERING until new roots form and growth is evident. Basket tubers, which do not show more than two branches at the beginning of the season, should have the tips pinched off when the first flower bud appears. This will form a fuller basket.

DIGGING AND DORMANT STORAGE

Plants should be allowed to continue growing through November, if possible. During this late period the tuber increases in size and stores up energy for next season. Pot plants may be forced into dormancy at any time by withholding water. Bedded plants may be dug with a ball of soil, placed in a dry shed if necessary to force dormancy. In the Eastern section where chance of early frost may injure the plants, they can be lifted with large amount of soil and set in basement or frostless place where they gradually will mature. The first light frosts will not harm the tuber. When foliage drops, and all growth breaks free of the tuber, wash soil free of tuber and cure in the hot sun for four days, or longer, until tuber is hard and dry. Be sure to remove all particles of the old stem from tuber. If this is neglected their decay will destroy the tuber. Store in open flats in a cool, dry place until evidence of growth is noted, usually in February or March. Remove from storage, and handle as outlined under "Planting Dormant Tubers."



Rose Form

STANDARD GRADE

PICOTEE

ROSE FORM PICOTEE SHADES

The most spectacular advance in tuberous begonias is the transformation of the little old marmorata into the large Rose Form Picotee of today, a process of twenty years breeding. Of all types, this group brings the highest proportion of uniformly fine form when grown from seed. The demand has risen in proportion to the advances in quality and has made them the most popular of all types. Regardless that we grow larger quantities each year, we never seem to satisfy the demand.

SPECIAL SELECT

Available in Colors as Listed Under Standard Grade

During flowering season we select and mark all the choicest new seedlings which are above average in size, form and color. We are offering tubers of these to connoisseurs who desire only the finest for their gardens.

Tubers—Delivery, January-March.

Large size, 2" up . \$1.50 ea.; \$15.00 per doz.

Medium size, 1½" \$1.00 ea.; \$10.00 per doz.

AVAILABLE COLORS

Red Shades, Pink-Rose Shades, Salmon Shades, Apricot.

TUBERS

Large size, 2" up .75c ea.; \$7.50 doz.; \$60.00 per 100

Medium size, 1½" 50c ea.; \$5.00 doz.; \$40.00 per 100

SEEDLING PLANTS

Available in May and June.

\$6.50 per 25; \$25.00 per hundred, FOB CAPITOLA.

Due to cost of packing no orders for less than 25 accepted.

SEED

\$4.00 per packet; \$2.00 per half packet (straight colors or mixture).

PLEASE USE THIS ORDER FORM

VETTERLE & REINELT

Hybridizing Gardens

CAPITOLA • CALIFORNIA

(Please Print Plainly)

Name _____

Address _____

KINDLY LIST TUBERS, PLANTS AND SEEDS SEPARATELY

QUANTITY	KIND OF TUBERS	COLOR	PRICE

PLANTS

QUANTITY	KIND OF PLANTS	COLOR	PRICE

SEEDS

QUANTITY	KIND OF SEEDS	COLOR	PRICE

California Customers please add 4% Sales Tax.

Please do not make remittance by stamps.

TOTAL _____

TERMS: Cash with order.

SUBSTITUTIONS: If sold out of any variety ordered we shall supply a similar one of equal value unless otherwise specified on your order. YES ☐ NO ☐

This Flap is Gummed, Ready to Seal
NO ENVELOPE NEEDED—ENCLOSE CHECK OR M.O. AND MAIL
VETTERLE & REINELT
CAPITOLA • CALIFORNIA

PARCEL POST RATES

Weight in Pounds	ZONES							
	1-2	3	4	5	6	7	8	
	Up to 150 mi.	150 to 300 mi.	300 to 600 mi.	600 to 1000 mi.	1000 to 1400 mi.	1400 to 1800 mi.	Over 1800 mi.	
1.....	\$0.18	\$0.23	\$0.23	\$0.24	\$0.26	\$0.28	\$0.30	\$0.32
2.....	.20	.27	.29	.31	.36	.40	.46	.51
3.....	.21	.31	.34	.38	.45	.52	.61	.69
4.....	.23	.35	.39	.45	.54	.64	.76	.87
5.....	.24	.39	.44	.52	.63	.76	.91	1.05

AIR PARCEL POST RATES

Weight in Pounds	1-2-3	4	5	6	7	8
	Up to 300 mi.	300 to 600 mi.	600 to 1000 mi.	1000 to 1400 mi.	1400 to 1800 mi.	Over 1800 mi.
Over 1/2 to 1.....	\$0.60	\$0.65	\$0.70	\$0.75	\$0.75	\$0.80
2.....	1.08	1.15	1.26	1.39	1.47	1.60
3.....	1.56	1.65	1.82	2.03	2.19	2.40
4.....	2.04	2.15	2.38	2.67	2.91	3.20
5.....	2.52	2.65	2.94	3.31	3.63	4.00

IMPORTANT

SEEDS, TUBERS. Sent prepaid. Add 50¢ packing charge on orders of less than 1 dozen tubers. ALL PLANTS.... Are shipped by Parcel Post. Allow 4 pounds for each dozen. Postage payable by purchaser.

To insure better delivery we suggest air parcel post in Zones 6-7-8. Special handling will expedite shipment. Add 35¢ up to 2 lbs., 45¢ up to 10 lbs., 60¢ up to 100 lbs.

Please PRINT or write your orders plainly and if writing us use separate sheet of paper.

PLEASE NOTE: Begonia Tubers available January to March. Begonia Seedlings available end May-June. Begonia Seeds available December 1st. Delphinium Plants available March-June and September-November. Delphinium Seed available fresh crop July. Primrose Plants, Specimen Divisions available June to September. Primrose Seedlings available February and March. Primrose Seed available fresh crop July. Limited supply.

Tubers and Plants are charged at unit prices if labeled separately as to color, etc. If assorted at dozen rate will be shipped assorted.

In the event of any inquiry concerning your order, kindly give fullest particulars possible, as with our hundreds of orders this will help us and expedite replies. All stock guaranteed, true to description but no guarantee for result of growing over which we have no control.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

VETTERLE & REINELT
Hybridizing Gardens
CAPITOLA • CALIFORNIA

from _____

PLACE
STAMP
HERE

Remember Please
ORDER NOW

Our business
has been built
on the quality of
our product.
Every year we
are obliged to
return thousands
of orders to our
customers, who
have delayed
in sending their
order—so to
be sure...

Order Now!



Hanging Basket Begonias

SPECIAL SELECT TUBERS

Available in Colors as Listed Under Standard Grade

During flowering season we select and mark all the choicest new seedlings which are above average in size, form and color. We are offering tubers of these to connoisseurs who desire only the finest for their gardens.

Tubers—Delivery, January-March.

Large size, 2" up . \$1.50 ea.; \$15.00 per doz.

Medium size, 1½" \$1.00 ea.; \$10.00 per doz.

DOUBLE HANGING BEGONIAS

Their hanging habit, with great masses of blooms, makes them favored for the decoration of greenhouses, open verandas or sun porches, where they can be protected against strong winds and light. We have been improving this type by interbreeding them for a number of years with the double Camellia type for the size of flower and variety of color. Our this year's offerings are further advanced, combining medium-sized flowers and good hanging habit.

AVAILABLE COLORS STANDARD GRADE

White, Pink, Rose, Crimson, Salmon, Yellow, Apricot, Orange, Scarlet, Red Salmon.

TUBERS

Delivery, January-March.

Large size, 2" up . 75c ea.; \$7.50 doz.; \$60.00 per 100

Medium size, 1½" 50c ea.; \$5.00 doz.; \$40.00 per 100

SEEDLING PLANTS

Available in May and June.

\$6.50 per 25; \$25.00 per hundred, FOB CAPITOLA.

Due to cost of packing no orders for less than 25 accepted.

SEED

\$4.00 per packet; \$2.00 per half packet (straight colors or mixture).

Failures and Remedies

On this page we shall try to list the most common failures that are reported to us by inexperienced growers.

1. *Dropping of buds and flowers.*

Several factors are responsible for this phenomenon, the foremost of which is high temperature. Begonias are native to high altitudes in the tropics growing from an elevation of five thousand feet up. This means cool daily temperatures and decidedly cool nights. In California's central valleys or in any region where the temperature rises above ninety degrees, buds and flowers will often drop during the warmest summer days, but will hold them in autumn when nights are cooler.

Another factor is a poor root system. When plants are freshly transplanted they will often drop the buds and flowers until they develop a new root system.

Plants that suffer from poor drainage and are heavily overwatered will often drop their buds completely. The soil should always be moist, but never soggy-wet. On the other hand extreme drying out and too sunny a location will cause the same difficulty.

2. *Too many leaves and not enough flowers.*

Some begonias inherit a strong branching habit, and if several shoots are left on a tuber, especially if it is well fed, will form a very bushy plant with too much foliage. The flowers won't be able to come through. One can clip some of the upper leaves covering the lower shoots to bring light in, but care should be taken to cut only the leaves and to leave the leaf stems on the plant to mature and eventually fall off. If cut close to the main stem they will mold infecting the main stem and destroying the plant. To overcome extensive, bushy growth, one should leave only one shoot per tuber or if a large tuber, two or three shoots facing in opposite directions, breaking off the remaining young shoots before they reach a height of two or three inches. The wounds should be left exposed to air and not covered for several days in order to heal. It could also be done before the sprouting tubers are planted in flats with a thumb or cutting them off with a sharp knife, leaving only the strongest to grow.

3. *Leggy plants with sparse bloom.*

The amount of light begonias receive governs their growth. If exposed to too much sunshine, they will be dwarf, forming thick shiny leaves and the flowers will burn. Extreme shade again produces very tall skinny plants with a few or no flowers at all. One should seek the happy medium where the plants get full light without direct sunshine in which they will bloom profusely and will not grow too tall. Begonias will not perform as house plants excepting on glassed porches where they have overhead light. If no overhead light is available, they will simply grow leggy and not bloom.

4. *Overfeeding.*

Begonias require judicious feeding in order to produce large well formed specimens, but overfeeding causes perhaps more damage and shortens their lives more than any other factor. The quick acting fertilizers such as fish-meal and fish-emulsion are of organic nature and can hardly do damage unless used in excessive quantities. The first sign of overfeeding is a rich bluish-green color of the leaves which curl under. The plants will produce distorted flowers smaller in size, but gradually as the nitrogen in the soil diminishes, they will come out of it and perform normally. If chemical nitrogen is used in such form as nitrate of soda, sulphate of ammonia or nitrate of potash, the plants simply burn up if overfed. The growth will be stunted with small flowers or none, and upon maturing the tubers, you will find them completely petrified. The ideal feeding is to keep the plants always slightly hungry by giving them light doses of liquid fish-meal or any other commercial fertilizer recommended for tuberous begonias and religiously following the directions prescribed on the containers. If foliage is a blue-green withhold feeding as they are receiving too much nitrogen. Start feeding again when the foliage is a soft green color. Very pale green foliage is a sign of a deficiency of nitrogen and requires increased feeding. This is a simple rule which anyone can see at the first glance at the plants. We get the finest flowers when plants are underfed and the foliage is just deep green.

5. *Rotting of plants.*

The tissue of begonia plants is quite sensitive to any decaying material which they contact. If young plants are set out in a soil heavily enriched with manure and the decaying parts of the manure come in contact with the stem, the plant will often rot off at the base. This happens more in warmer regions especially with high humidity and seldom appears under cool conditions prevailing along the Pacific Coast. A little clean soil or fine sand placed around the stem when planting seedlings will prevent the rotting off to a great extent. When flowering, the plants should be kept clean of all the debris of the old flowers and flower stems. Flowers should be removed leaving all of the flower stem or if cut, as much of the stem as possible, as the open wound immediately starts molding. If a stem is left long enough, it will mature and fall off from the main stem before the mold can reach its entire length. If cut too short, the mold will infect the main stem and if not checked, will decay the whole plant eventually. Old petals falling in the crotch of the leaves may start mold in an area which could be scraped clean with a knife, dried with a cloth, and dusted over with zerlate so it can heal. If the main stem is badly molded, it can be cut off below the infected part or even completely off if necessary. The plant should be kept slightly drier as it will send new shoots out as a rule trying to recover its health. In this way tubers can be saved and although weakened, they may perform well again the following year. If stem rot is not checked, it will go all the way down into the tuber and destroy it completely.

6. *Diseases and insects.*

Begonias are comparatively free of ills or at least they were until a few years ago. The only serious infection in the past was cyclamen mite which was rather rare and confined usually to greenhouses where many other plants were grown. The first sign of it is rusty brown streaks on the foliage and stems, the buds turning brown in the very young stage and falling off. An effective control can be had by spraying with various insecticides recommended for red spider and mites.

Bacteria leaf-spot appeared several years ago and attacks the plants chiefly in the greenhouses where there is high humidity and not enough aeration. It is most damaging to the young seedlings in their germination stage, and we have been controlling it with a weak solution of Greenol, spraying every five days until the plants reach the size for outdoor planting. It seldom attacks plants when they are larger and hardly ever if they are grown outdoors.

The latest and perhaps the most serious enemy is a *new variety of mildew* reported for the first time in 1951 in isolated areas and became widely spread ever since. Of all materials we have been gradually testing, spraying with Mildont or dusting with sulphur as soon as first signs of it appears, will control it perfectly. If not controlled it will spread rapidly and destroy the appearance of the plants for the season. However the tubers should not be thrown out as they may perform the following season perfectly since no disease is transmitted on them. Keeping the foliage dry especially at night also prevents the spread of any fungus disease.

Strawberry-weevil is wide spread particularly in the north, and the damage to the begonias is caused by the larvae of the brachyrhinus beetle during summer months. The beetles emerge from their dormant stage in early May and June laying their eggs all summer long. The eggs, which are deposited around the stem of the plant, hatch rapidly, living in their first and second stage on decaying material such as leafmold and manure. It is in their third, fourth and fifth stage as the larvae gets larger that it burrows into the tuber, tunneling back and forth until the bulb is completely destroyed. The only effective control is feeding with a mixture of three percent calcium arsenate in bran or apple bait spread among the plants during May and June when the beetles feed and before the egg laying period begins.



Delphinium Hybrids

Delphinium can be grown successfully in every part of the United States. In the north, where cool weather and high moisture prevail they will be perennial, but become shorter lived as they go South, with increased temperatures during summer, and finally have to be treated like annual in Southern regions and Florida. Seed sown in March or April, in light mixture of soil, covered slightly with coarse leaf mold and kept continuously damp and shaded, will germinate in approximately 10/14 days. When second leaf develops, transplanted in flats or open frames they will grow rapidly if shaded against strong sunshine for the first two or three weeks. Planted in a permanent place, preferably in a light loamy soil, which has been heavily enriched with decayed manure, and an addition of bone meal, they will establish rapidly and form flowering plants by September. The following Spring, when the new shoots come through the ground, select only two or three of the largest, and break the rest off. Addition of quick acting fertilizer, such as ammonium phosphate, will force the growth very rapidly, and according to richness of soil one can get beautiful show specimens to bloom in late Spring. After the flowering, water should be somehow withheld and the flower spikes cut off, leaving the foliage standing until new growth commences again from the

ground. When the new shoots are advanced the old ones can be cut out, and another heavy feeding of quick acting fertilizer applied. In this manner you can have two good flowering seasons in one. In southern regions it is preferable to sow the seed in July/August, so that the plants can be in permanent location in October. They will develop large root system during winter and give very fine show in early March/April. The main factors for good success are sunny location, rich loamy soil, and continuous supply of moisture during the growing season.

The British Delphinium Society extends an invitation to join and receive its year book for \$2.50 per year. We shall gladly accept the amount and forward it to England for those who wish to join. Or send direct to Miss D. L. Pattenden, 63/64 New Broad St., London E.C.2., England.



Pacific Strain of

DELPHINIUM HYBRIDS

The names of our Delphinium series, with the exception of the blues, which have descriptive names, have been chosen from Tennyson's "Idylls of the King."

The Pacific Strain of delphinium has been in commerce for over 25 years now and has become a standard for the highest quality in delphinium all over the world. Instead of making extravagant claims, we would like to let our flowers speak for themselves when you grow them.

LANCELOT SERIES

A clear lilac self with white bee. A rare color in Delphinium and one of the most beautiful. It has well-balanced spikes and carries large flowers of fine round form.

GUINEVERE SERIES

A clear, pink-lavender self, with white bee; with very large individual flowers averaging up to three inches in diameter. This is a true exhibition type and a beautiful garden plant.

CAMELIARD SERIES

Bicolor lavender with white bee, possessing classical perfection of form of the individual flowers, which are very round and attain very large size, averaging three inches in diameter. Beautifully balanced spikes, combined with excellent growing habits.

KING ARTHUR SERIES

This is still one of the most brilliant Delphiniums we have so far developed. The color is a rich, royal purple, with a velvety texture and large white bee, and the beautifully formed, long spikes are carried on thin, woody stems.

BLACK KNIGHT SERIES

The darkest violet. Individual flowers two and one-half to three inches in diameter; of beautiful round form, with heavy velvety texture, which gives the color luminosity and vividness not seen before in Delphinium. Very long, well-formed spikes; a true show flower with black bee.

ASTOLAT SERIES

Color variations extend from pale blush through all shades of lilac pink to deep raspberry rose with large fawn and black bees for contrast. The entire range is pictured on these pages.

ROUND TABLE SERIES

As the name implies, this represents all of the color combinations of the Knights and their Ladies which will eventually be introduced. This year some three hundred different crosses were used to make up this group, combining all the newest color developments and possessing size that will make them invaluable for show purposes.

Contrary to the popular practice of naming individual plants, our aim is to produce a group of individual plants resembling each other as closely as possible, keep interbreeding them until the progeny brings a high percentage of specimens true to description, and then introduce it as a named series. In this manner we can offer new progressions of each series each year as the progeny always supercedes the parents.

SUMMER SKIES SERIES

Light, heavenly blue of a summer sky with white bees representing the fleecy clouds; a color long sought in the large hybrid Delphinium. They come almost 100% true to color from seed, with such a uniform growth that many experts who saw the planting last spring at our nursery, thought they were propagated from cuttings and could scarcely believe that they were seedlings. As a class this is the finest blue Delphinium today in existence.

BLUE BIRD SERIES

A true blue Delphinium has been the hardest thing to produce and we have been reserving the name Blue Bird to signify our best achievement in this color. We can safely recommend this series as being the clearest medium blues, with white bees. They not only come true to color but carry well-formed, round flowers 2½ inches in diameter, on very long, graceful spikes. The habit is all one could desire in modern Delphinium and this series sets a new standard in blues of today.

BLUE JAY SERIES

Every Delphinium lover seeks the true blue color which is so rare in nature and so difficult to obtain. These series are our bid toward attaining it. The color is striking, clear medium to dark blue; very intense and alive, with dark, contrasting bee.

BLUE MIXTURE

Besides the named blue series we can supply a complete mixture of blues ranging from lightest to darkest blue with white, fawn and black bees. Each shade when stabilized will eventually be named, but at present all new crosses for that purpose are blocked into one mixture containing all the above series and a great many unusual new shades of blue.

GALAHAD SERIES

Our greatest achievement in giant whites, fully worthy of its name, which possesses all the qualities one expects to find in a fine Delphinium. The standard attained in this series is perhaps responsible for the wide popularity it met, ranking in demand next to the blues. The clear white flowers, with white bees, are of large size, reaching often three inches in diameter, combined with glistening, heavy texture.

PERCIVAL SERIES

A companion to the Galahad Series, of equally good quality. The large, glistening white flowers with strongly contrasting black bees are beautifully spaced on long, tapering spikes. Very vigorous and free growing habit.

COMPLETE MIXTURE

All varieties shown on these two pages are available in our mixed packets.

PRICE OF SEED

ANY SERIES OR COMPLETE MIXTURE

Selected from finest new specimens, and of highest quality obtainable.

\$2.50 per packet (over 400 seeds)

\$1.50 per half packet (over 200 seeds)

Collection of any series on pages 12 and 13;

5 packets or 10 half packets \$10.00



DELPHINIUM PLANTS

During March and April and September and October we are offering *strong, young plants*, in twelve assorted shades, as marked from cross-pollenized seed. Transplanted, they will grow rapidly on and bring far better results in a shorter time than the old clumps. We prefer distribution of young seedlings rather than the one- or two-year-old clumps, which very seldom bring good results, as they are quite exhausted, and it takes a year at best to get them re-established, during which time the flowers are not at their best. Young seedlings will produce show specimens within four or five months after planting and continue blooming for several years. In California interior valleys where the climate is too warm, autumn planting, September and October, is preferable. Plants having time to establish good root systems during winter will bring beautiful spikes in early spring. Cooler regions will give good results from both autumn and spring plantings, except in heavy, cold soils, where spring planting is preferable.

SEEDLING PLANTS, FOB Capitola

\$3.50 per dozen, \$26.00 per 100

Orders for less than One Dozen not accepted



Polyanthus *Primroses*

As the Polyanthus group is the most hardy and easiest to grow of all the Primrose family, succeeding in practically every climate, we have concentrated our work on improving this particular type. Twenty years of intensive breeding have brought a wider and clearer color range, taller stems, and larger size of individual flowers and flower heads than we dreamed was possible. Over 100,000 seedlings are grown annually for selection, one per cent of which is retained for seed production. In this manner, interbreeding only the very finest of the new seedlings and growing a new generation each year, we have been able to develop a strain that is above any competition today.

The most outstanding new seedlings each year are lifted from field outdoors, potted up and transferred into greenhouses, where they are carefully cross pollinated. While this method is very costly, it is the only one that insures the highest quality possible. NATURALLY the quantity is very limited and we recommend it only to those who wish to grow the finest.

PLANTS

Available in the following colors:

White, Yellow, and Gold, Bronze Blends, Flame-Scarlet, Dark Red, Carmine-Rose, Pink and Pastel Blends, Light Blues, Dark Blues, Violet Blends.

Delivery . . .

February-March with flowers on, September-October without flowers.

Price . . .

\$5.00 per doz; \$40.00 per hundred, FOB CAPITOLA. No order less than one dozen accepted.

SEED

Blends . . .

Pink Blends, Pastel Blends, Blue Shades.

Price . . .

\$5.00 packet; \$2.50 per half packet.

White, Rose, Crimson Rose, Scarlet, Dark Red, Yellow, Bronze.

Price . . .

\$4.00 packet; \$2.00 per half packet.

Complete Mixture of All Colors . . .

\$4.00 per packet: \$2.00 per half packet.
Full packet contains over 350 seeds.



CULTURE OF PACIFIC STRAIN

POLYANTHUS PRIMROSES

SOWING SEED

Seed of Pacific Strain Polyanthus primroses can be sown at any time of the year. In the East, March or April sowings in frames will provide strong seedlings for September bedding. California and mild sections can sow in June, bedding seedlings in October. Sow seed in flats, or open beds which can be shaded and protected from wind. The best soil is one rich in organic material and light in texture. One-half leaf mold and one-half sandy garden soil is satisfactory. Cover seed lightly with leaf mold or other light material. Vermiculite is a good, light cover. Moisten flats or beds thoroughly, and cover with burlap to prevent drying out. Do not allow flats or beds to become dry at any time during germination, or the percentage of seedlings will be disappointing. Seed will germinate within two to three weeks. Minimum moisture, and shade from the sun's rays.

TRANSPLANTING

Transplant in six to eight weeks in a soil previously enriched with old cow or steer manure, continuing to shade. In the East a light mulch will prevent frost heaving. Additional feeding of complete fertilizers before flowering is required for vigorous plants. When 2 years old, divide and replant in fresh soil. Pacific Strain Polyanthus primroses are hardy in every state in the U. S.



DISEASES

During the spring blooming season primroses are subject to aphid and cutworm damage. Later, during hot weather, red spider and two-spotted mites are apt to deplete the plants' energy. Regular weekly spraying with Isotox will control these pests.

Black spots on leaves is a disfiguring disease, and weakens plant growth. Weekly spraying with DuPont Manzate is an effective control.

Isotox and Manzate may be combined as a complete spray.





VETTERLE & REINELT
CAPITOLA, CALIFORNIA

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